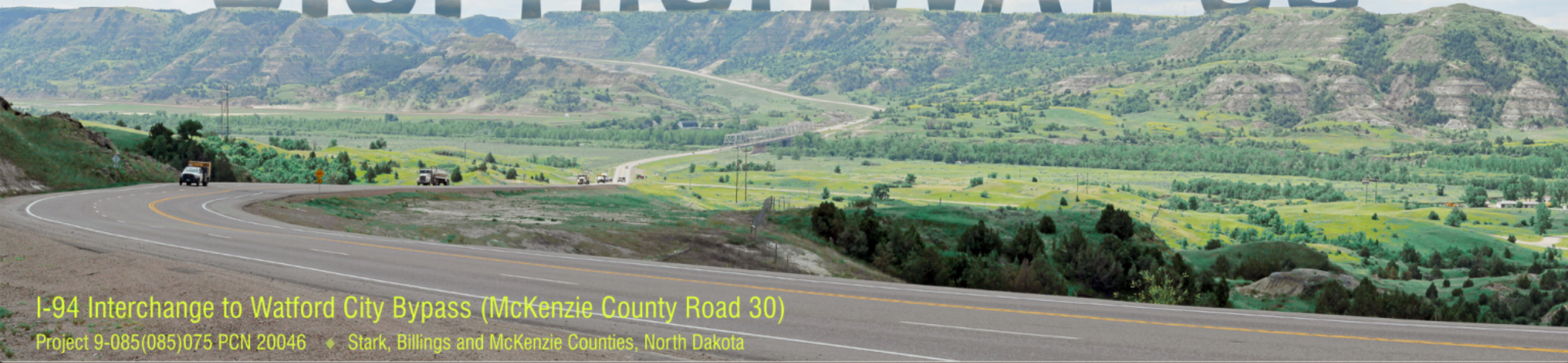




August 9, 2017

U.S. HIGHWAY 85



I-94 Interchange to Watford City Bypass (McKenzie County Road 30)

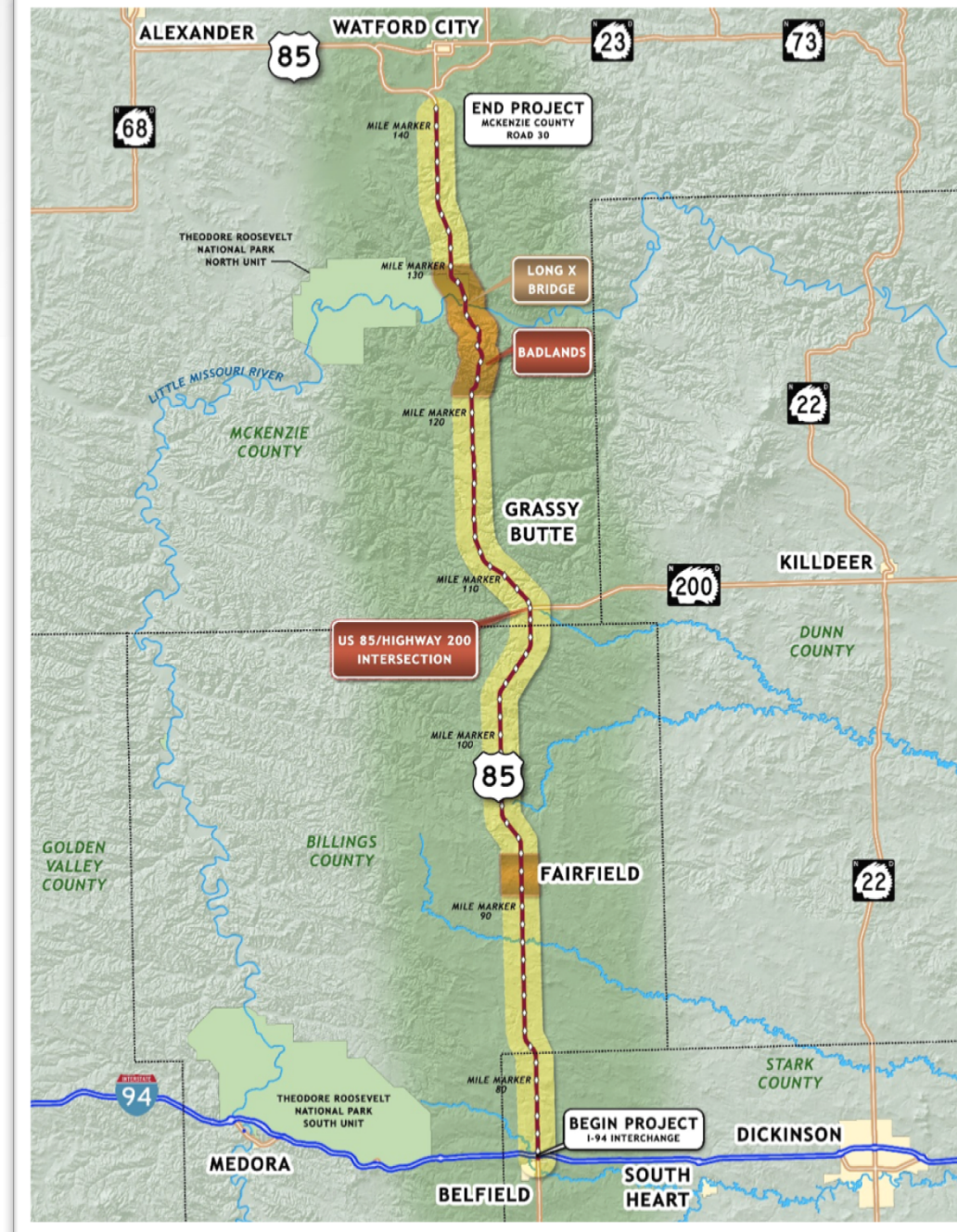
Project 9-085(085)075 PCN 20046 ♦ Stark, Billings and McKenzie Counties, North Dakota



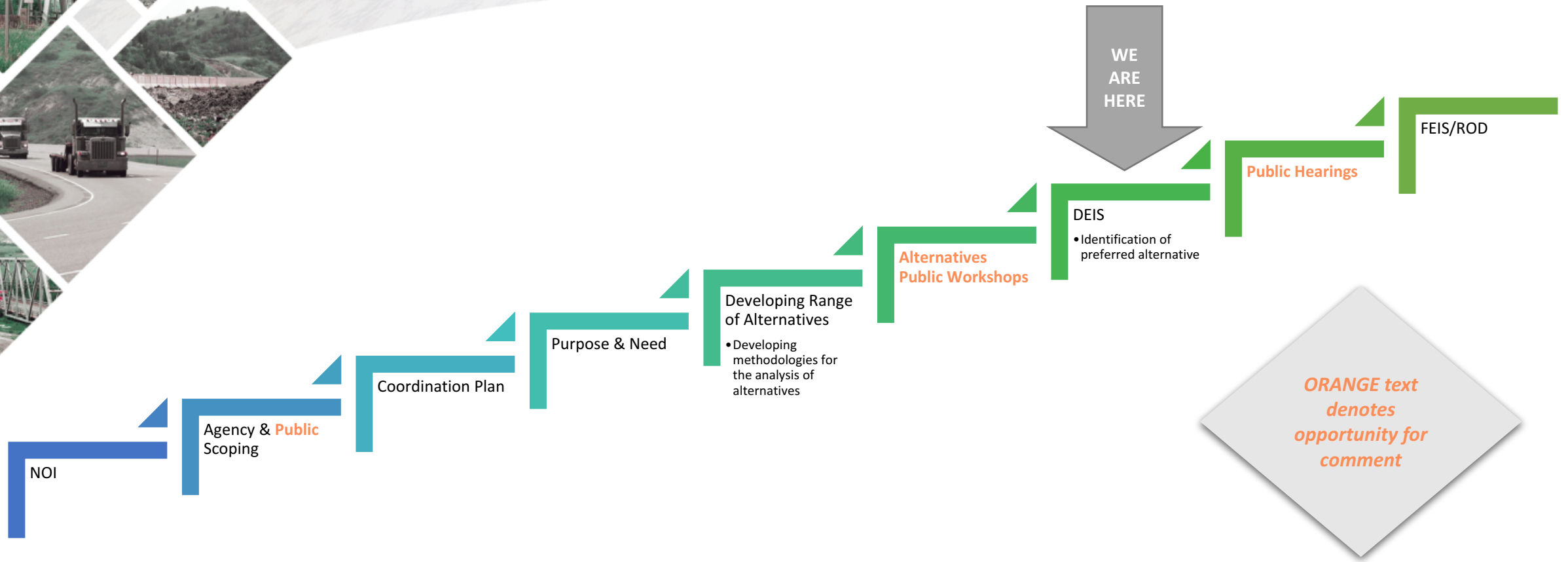
Little Missouri River Scenic Commission

Description of the Proposed Project

- › Expand US Highway 85 to four lanes (with flexible design options to avoid or minimize impacts)
- › Rehabilitate or replace the historic Long X Bridge over the Little Missouri River
- › EIS
 - Lead agencies: FHWA & NDDOT
 - Cooperating Agencies: NPS, USACE, USFS



Overview of EIS Process





Long X Bridge

- › Historic Bridge
- › Constraints
- › Three Alternatives Under Consideration:
 - Increase Vertical Clearance (Rehab) & Construct New Two-Lane Bridge Adjacent
 - Retain Existing Bridge for Alternate Use & Construct Four-Lane Bridge Adjacent
 - Remove & Replace Existing Bridge with New Four-Lane Bridge

Increase Vertical Clearance & Construct New Two-Lane Bridge Adjacent



*Approach view:
Increase Vertical Clearance & Construct
New Two-Lane Bridge Adjacent*



*Aerial view:
Increase Vertical Clearance & Construct
New Two-Lane Bridge Adjacent*



Retain Existing Bridge for Alternative Use & Construct Four-Lane Bridge Adjacent



*Approach view:
Retain Existing Bridge for Alternative Use &
Construct Four-Lane Bridge Adjacent*



*Aerial view:
Retain Existing Bridge for Alternative Use &
Construct Four-Lane Bridge Adjacent*



Remove & Replace Existing Bridge with New Four-Lane Bridge



*Approach view:
Remove & Replace Existing Bridge
with New Four-Lane Bridge*



*Aerial view:
Remove & Replace Existing Bridge
with New Four-Lane Bridge*



Construction Methods – New Bridge

- › Bridge superstructure supported by driven pile system and/or drilled shaft system
- › Total of 5 piers
 - 2 on south bank
 - 2 in the river channel
 - 1 on the north bank
- › Cofferdams or earthen ring dike
- › Causeway or bypass – river flow would be maintained by the installation of temporary culverts or leaving part of the channel open





Construction Methods - Rehabilitation

- › Perform modifications to the truss portals and install strengthening plates on the truss members
- › Remove the existing deck and traffic barriers and install shear studs on the existing stringers
- › Bridge would be contained, sandblasted and repainted
- › Pour the new deck, install the new expansion joints, traffic barriers and guardrail

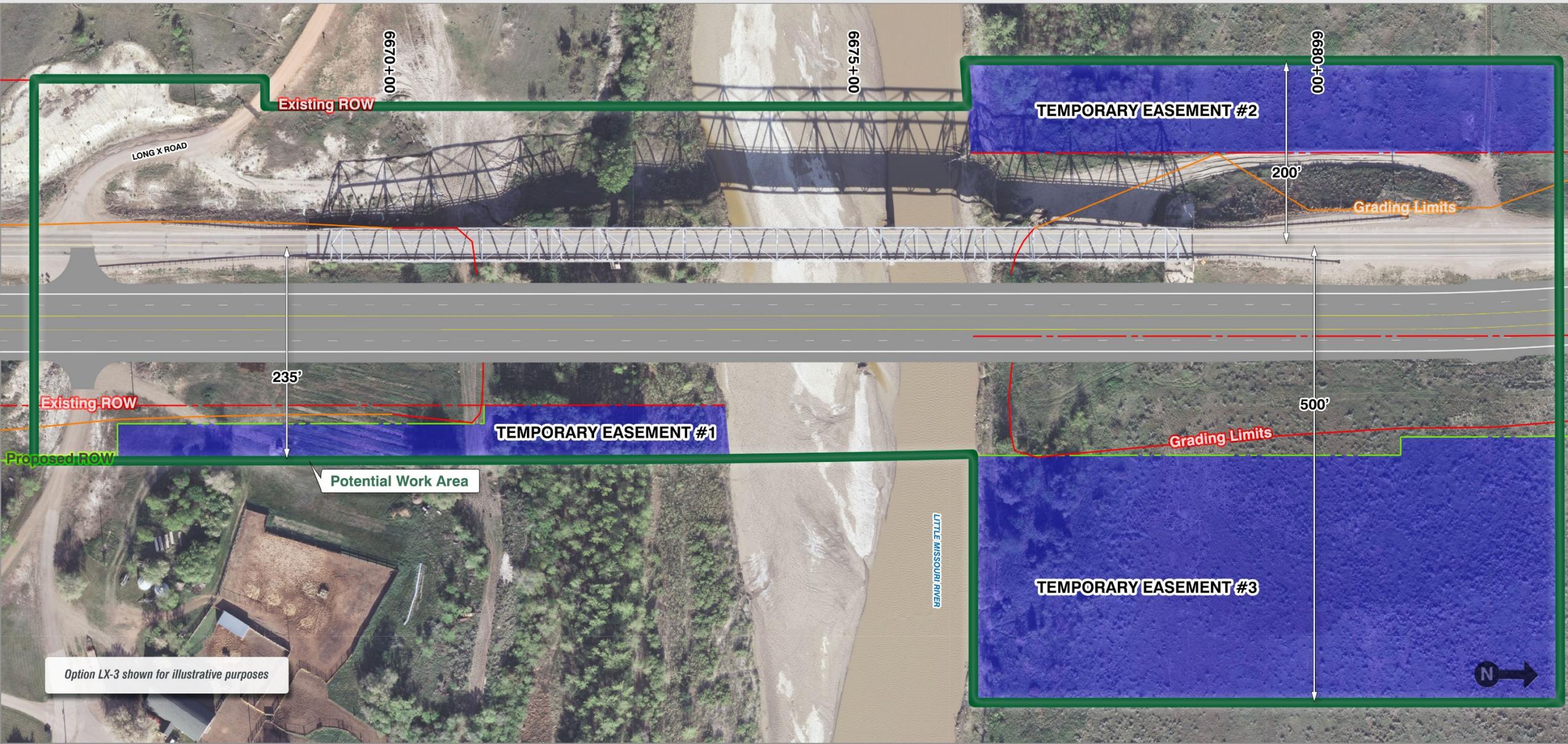


Demolition

- › Bridge deck would likely be sawed into pieces using a concrete saw and loaded onto trucks for disposal
- › Shield system installed below the deck – prevent debris from falling into the water during sawing operation
- › Use of shaped charges for the demolition of the steel superstructure
 - Dropped in water, all components removed and loaded onto trucks for disposal
- › All piers and abutments would be removed to a depth of 1-foot below the river bottom and no debris would be allowed to remain in the river channel
- › Shaped charges or conventional construction equipment will be used to remove the piers

Staging Areas

Construction Easements for
Long X Bridge Options



Questions & Comments

